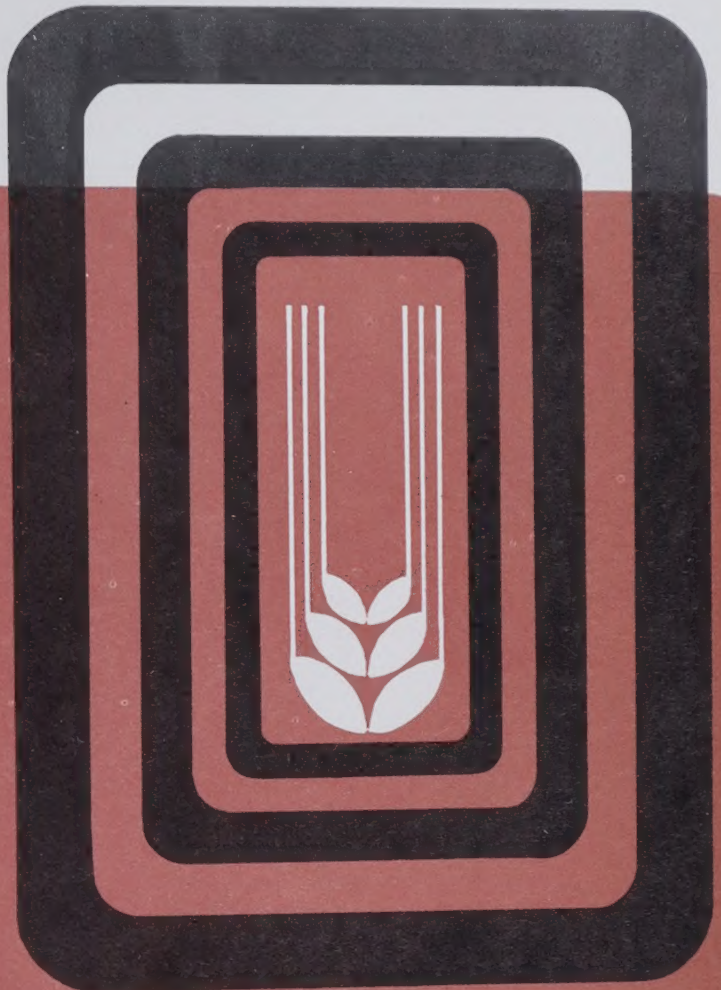
Vol.9 No.4
ctober—December 1987

FOOD PATENTS

ISSN 0253 - 4916



Central Food Technological
Research Institute, Mysore—570 013
(C.S.I.R., India)

National Information System for
Science and Technology
Dept. of Science and Technology

NATIONAL INFORMATION CENTRE FOR FOOD SCIENCE AND TECHNOLOGY

CENTRAL FOOD TECHNOLOGICAL RESEARCH INSTITUTE
MYSORE - 570 013

For the kind attention of Subscribers

You have been one of our esteemed subscribers for our periodicals *Food Technology Abstracts/Food Digest/Food Patents* and it is our hope that we have been able to meet adequately your information requirements.

In the recent past, the cost of compilation and production of these periodicals has escalated substantially. So far we were providing these at a subsidised rate which we cannot affort to continue for long. Therefore we are compelled to increase the subscription atleast to meet the cost of compilation and production besides packing and forwarding charges, so that the publications become selfsustaining. We hope you will bear with us and continue your cooperation by renewing your subscription at the new rates indicated below.

In the near future we are going to improve the get up of the text by the use of the laser printer instead of the dot matrix printer, and also improve the overall get up of our publications.

After a careful consideration of all aspects of production, we have decided to fix the following subscription rates effective from January 1988. Hope you will cooperate with us.

	Annual Subscription (effective from January 1988)	
	Indian	Foreign
	Rs.	US Dollars
Food Technology Abstracts (Monthly) ...	250/-	85
Food Digest (Quarterly) ...	150/-	65
Food Patents (Quarterly) ...	100/-	50

You can also enlist your name for our SDI (Selective Dissemination of Information) Service.For more details on this, please write to us.

CENTRAL FOOD TECHNOLOGICAL RESEARCH INSTITUTE
(National Information Centre for Food Science and Technology)
Mysore - 570013

SUBSCRIPTION ORDER FORM

To:

The Director
Central Food Technological
Research Institute
Mysore - 570 013 (India)

Dear Sir,

Please enter my/our subscription for the following*publications for 198 (Jan-Dec.)
(year)

	Annual Subscription	
	Indian	Foreign
	Rs.	US $
1. Food Technology Abstracts -- (Monthly)	250.00	85.00
2. Food Digest (Quarterly) --	150.00	65.00
3. Food Patents (Quarterly) --	100.00	50.00

* Tick items required.

Cheque/Demand Draft/MO for Rs._____/$_____ in the name of Director, CFTRI, Mysore - 570 013, India, is enclosed.

Signature:

Name and
Full Address:
(In block letters)

Date:

Encls:

FOOD PATENTS

Vol.9 No.4
October—December 1987

National Information Centre for Food Science and Technology
Central Food Technological Research Institute,
Mysore — 570 013, India

CONTENTS

ENGINEERING AND EQUIPMENT

562 Apparatus and method for continuous production of acetic acid and vinegar by fermentation.

AIR LIQUIDE, SOCIETE ANON. POUR L'ETUDE ET L'EXPLOITATION DES PROCEDES GEORGES CLAUDE.

France 2,573,090 (November 1984)

563 Device for food oxidation control by magnetic force.

BABA, NOBUKATMSU AND OTHERS

Japan 62,107,752 (November 1985)

564 A device for discriminative breaking of made tea leaving out stalks intact.

TEA RESEARCH ASSOCIATION

India 159500 (May 1987)

The machine consists essentially of one or more cylindrical rotors mounted inside a casing. The motor cylinder is made up of a number of longitudinal rods joined to two plates at their ends. Each cylinder is partially surrounded by a set of flat plates arranged in a substantially arcuate manner with respect to the rotor. When a tea leaf/tea stalk mixture is fed in from the top, a little distance away from the centre, they strike against the rods of the rotating cylinder and rebound from the surrounding plates. The more fragile tea leaves break into smaller particles, while the less fragile stalks remain intact. Thus, it becomes easier to separate the stalks from the leaves.

565 Juice squeezing device.

MANCK METAL INDUSTRIES

India 159086 (March 1987)

The device consists of two levers hinged together approximately in their middle. One lever has a pressing device (in the shape of a dome) at one end, opposite to a strainer-holder device on the corresponding end of the second lever. The device is ofsturdy construction and can be used for a long time before it falls apart.

566 Apparatus for dispensing pre-determined weights of material into containers.

DESIGN ENGINEERING PTY LTD.

India 158552 (December 1986)

The apparatus consists of a pair of pivotable support members, a material feeding chute, and means for directing the feeding chute consisting of two, substantially inextensible, flexible lines (chains or strings). The apparatus can be used to dispense granular or powdered products, such as root crops and fruit, as well as grain, fertilizers, chemicals, sugar, foodstuffs, etc. It can be adapted to disperse bulk liquids also. The device can be operated "in the field" without recourse to electric power.

567 Apparatus for dehydration of organic materials.

AKT CONSULTANTS PTY LTD.

India 159480 (May 1987)

The apparatus consists of an agitating chamber and a dehydrating tower through which the material to be dried has to be passed. Hot air is blown through the chamber and the tower to dry the materials which may be fish, meat products, or waste materials from poultry and fish processing. The apparatus is very flexible in operation; e.g. the residence time of material within the dehydrator may be readily altered, even during continuous operation.

568 Apparatus for drying granular or fibrous materials.

CEYLON TOBACCO CO LTD.

India 157806 (June 1986)

This solar dryer consists of a trough with a perforated top deck. Over the deck there runs a porous fabric adapted to act as a solar energy collector. The granular or fibrous material to be dried is distributed over this fabric which can be moved forward or backward by means of rollers. The bottom of the trough slopes downwards from end to end, the lower end being connected via a transition duct to an exhaust fan. When the belt is fully laoded, the blower is started, causing air to flow through the material to be dried and the heated fabric into the trough, and out. By this means, an evaporation rate of 2-5 kg H_2O/m^2h can be reached, compared to a drying rate of 1 kg H_2O/m^2h, when the material is just spread out in the sun.

569 Vertical frictionally abrasive roll rice polishing machine.

SOICHI YAMAMOTO

India 1 7652 (May 1986)

The rice polishing machine described in this patent is so designed that hulled rice grains are fed into the polishing chamber from above, in the vertical or axial direction, and the polished rice grains are discharged, also vertically or in the axial disection, below the chamber. It consists of a vertical polishing cylinder mounted within a vertical abrasive roll at the upper end of the shaft. The cylinder can be moved vertically up or down, depending

upon the load, while the abrasive roll can rotate, but cannot move in the vertical direction. The volume of discharge can be varied by moving the cylinder up or down. The machine is superior to easier machines with horizontal or vertical shafts, in that feeding and discharge of rice grains are facilitated, and breakage of rice grains is substantially reduced.

570 Device for clarification of a liquid.

AZERBAIJANSKY NAUCHNO-ISSLEDOVATSESKY INSTITUT VODNYBEK PROBLEM

India 146444 (June 1979)

The device described herein is useful for separating highly concentrated suspensions such as are obtained in chemical engineering, paper and pulp, food and ore concentration industries. The liquid to be clarified is passed into a conical diffusor vessel, having an expansion angle of 8-14. The vessel is divided into a flocculation zone and a zone of thin-layer settling. The flocculation zone is provided with a liquid flow divider consisting of equidistant plates arranged over the vessel cross-section. One end of each of these plates ends in a V-shaped shank whose expansion angle is 90, and is directed towards the liquid flow ascending in the vessel. The plates are located in planes normal to the diffusor axis.

571 A filtration apparatus.

PRESSURE COOKERS AND APPLIANCES LTD.

Indian 158 .754 (January 1987)

An apparatus, for filtration of water, which can be attached to the side-wall of a domestic pressure cooker has been described. It comprises a filter cartridge with a sintered glass filter disposed therein.

572 A crystallizer for allowing crystallization of sugar crystals in mother liquor.

BHUSAN LAL MITTAL

India 159 674 (May 1987)

A crystallizer consisting of at least two tanks, each equipped with a stirrer, a heat exchanger with flowing water as the cooling medium, an inlet, and an outlet, has been designed such that sugar can be crystallized at a variable maturity stage, and a variable ripening stage.

573 An improved portable solar cooker.

CSIR

India 159 461 (May 1987)

The device can be used to collect solar energy for heating or even cooking; when fitted with an electric bulb at an appropriate position, it can also work as a good light reflector - let us say, for cinematography. It consists of a profiled concentration which is collapsible and is made of flexible material with a good reflecting surface (e.g. a metallized plastic sheet glued on cloth or rubber sheet). The collapsible disc is concave and faces the sun, when in use. The disc is mounted on a simple and strong mechanism which enables the operator to track the sun by easy manual adjustments from time to time. The cooking pot is put on a base fitted on a shaft axial to the disc. All the parts are strong and light in weight. They can easily dismantled and packed in a box, for easy transport.

574 A modified solar cooker.

MOHAMMED MANSURUL HODA AND APPROPRIATE TECHNOLOGY DEVELOPMENT ASSOCIATES

India 159 541 (May 1987)

The rectangular box type of solar cooker which has an outer lid with a reflecting surface and an inner lid made of double-walled glass sheet has been modified so that it can be used at night also. Two electric bulbs (200W each) are fitted inside the box to cook or heat the food up at night. The box can hold 4 pots and can cook a meal for about 5 persons in 2 hours. When the bulbs are being used, the pots should be covered by an aluminium sheet with an asbestos sheet on top of it to prevent loss of heat to the exterior. The double-walled glass lid must also be closed when the box is being electrically heated.

575 Steam pressure cooker.

DR.HANS-GEORG BOEHM

India 159094 (March 1987)

The pressure cooker described in this patent has a cooking goods container with a uniformly extending rim and a divided (or multi-component) lid. One component of the lid is a central hood, and the other is a concentric frame surrounding the hood and extending below it. The frame makes contact with the lip of a profiled gasket which is arranged between the lid and the cookingpot. A locking mechanism has been provided which moves the frame radially outwards or inwards to open or close thepressure cooker. A steam release valve has also been provided on the lid.

576 An improved solar energy cooker.

DR.D.K.MANNAN

India 158 556 (Dec. 1986)

A multi-step, asymmetric reflector, solar cooker which yields a significantly improved performance throughout the year (especially in winter) than a single-reflector, solar, box cooker of the existing type has been described. It consists of a hot box assembly and a multi-step asymmetric reflector, consisting of a number of plane mirrors (usually three) fixed one above the other. Each successive mirror reflector is positioned at a progressively steeper angle.

577 Pressure responsible safety valves for pressure cookers for domestic use.

PRESSURE COOKERS & APPLIANCES LTD.

India 157 626 (May 1986)

The safety valves fitted in the lids of domestic pressure cookers consisted, hitherto, of a fusible play of metal (e.g. a lead alloy) which was supposed to melt when the steam pressure in the cooker reached a value of 30 psi. But if air were to be present within the body of the cooker, the melting point of the fusible alloy would be reached only when a pressure much higher than 30 psi was reached within the cooker body. To avoid the risk of excessive pressure build-up, a spring-loaded, pressure responsive safety valve has been designed such that it can operate safely repeatedly, and with certainty, when a pressure of 30 psi is reached within the cooker body.

578 Method of manufacturing a cylinder for a sugar mill.

FIVES-CAIL BABCOCK

India 159 426 (May 1987)

The manufacture of cane crushing cylinders for sugar mills poses certain delicate problems. Hence, the inventors have recommended drilling of several radial holes in the transverse planes of the cylinder until the radial channels are in communication with the longitudinal channels and fitting a plug having a blind hole at the inner end thereof, in each one of the radial channels. Circular grooves are cut in the exterior surface of the cylinder, with a circular slot at the bottom of each groove, a sufficient length to connect the bottom of the groove to the blind hole.

579 An evaporator.

STAINCO ENTERPRISES PVT LTD.

India 159 102 (March 1987)

The falling-film type of evaporator, described in this patent, is designed for use in the dairy industry. It consists of a preheater and a high heater, and a plurality of calendrias between the heaters. Each calendria has a plurality of tubes stacked therein for the flow of milk. The apparatus is characterized by the fact that at least one of the said calendrias has a coil for an auxiliary flow of the milk. Such a cool may, preferably, be provided with each of

the calendrias, with the outlet end of the auxiliary coil connected to the inlet end of the next coil in the preceding calendria.

PRESERVATION AND PACKAGING

580 Preservative compositions for foods.
ASAHI CHEMICAL INDUSTRY CO LTD.
Japan 62 58 974 (September 1985)

581 Labels containing alcohol and dye for monitoring temperature change in food preservation.
MISHIMA PAPER CO LTD
Japan 61 53 531 (August 1984)

582 Preservative food coating containing adipic acid.
KYOKUTO INTERNATIONAL CORP.
Japan 62 79 763 (August 1985)

583 Manufacture of dehydrated foods.
HAYASHIBARA BIOCHEMICAL LABORATORIES INC.
Japan 62,126,939 (November 1985)

584 Non-freezing fluid composition for rapid food freezing.
ABE, KAZUNOBO AND OTHERS
Japan 62,107,779 (November 1985)

585 Synthetic food packaging film suitable for subjection to smoking, based on an α-olefin-vinyl alcohol copolymer-polyamide mixture.
KUREHA CHEMICAL INDUSTRY CO LTD.
France 2,586,026 (August 1985)

586 Fresh food packaging materials.
KAO CORP.
Japan 62,83,876 (October 1985)

587 Packaging sheet and containers and pouches using the sheet.
TOYO ALUMINIUM KK
Europe 223,253 (November 1985)

588 Improvements in or relating to disposable pilfer-proof bags or containers.

BUELL GD

India 145 433 (Oct. 1978)

A disposable pilfer-proof bag has been made from a flexible material, like polythene, the mouth of which is stitched, welded, or otherwise sealed in such a way a means for opening the bag - e.g. a piercing or tearing element - is provided or disposed within the container.

589 Packing container with fold-out pouring spout.

TETRA PAK INTERNATIONAL AB

India 159 525 (May 1987)

The container, made of a flexible, semi-rigid, packing laminate, is parellelepipedic in shape, and has a fold-out pouring spout which is delimited from an upper wall of the container by means of linear weakenings which extend at unequal angles towards a sealing fin running centrally over the upper wall.

CHEMISTRY AND ANALYSIS

590 Removal of the N-terminal methionine from methionylproteins.

TAKEDA CHEMICAL INDUSTRIES LTD

Europe 204,527 (June 1985)

591 Extraction of plant proteins for foods.

RYOSHOKU KK

Japan 62,83,848 (October 1985)

592 A liquid detergent composition having high foaming characteristics.

HINDUSTAN LEVER LTD.

India 158 631 (Dec. 1986)

A liquid detergent composition, having high foaming characteristics and suitable for fabric washing, shampoos, and above all, in manual dish-washing operations has been described. It contains as active ingredients: (a) at least 2% by wt. of a water-soluble salt of a dialkyl ester of sulphosuccinic acid; (b) at least 1% by wt of a C_9-C_{15} alkylbenzene sulphonate and/or a C_{10}-C_{18} secondary alkyl sulphonate; and (c) a C_{10}-C_{18} alkylethersulphate. The total active detergent level should preferably lie in the range 16-40% by weight.

593 Process for the preparation of allylic and benzylic esters.

CSIR

India 159 282 (April 1987)

Primary and secondary halides of the benzylic or allylic groups - i.e. those which bear an aryl or olefinic and substituent on the (α-carbon atom) - can be reacted with zinc salts to yield the corresponding esters. Preliminary preparation of the zinc salt is obviated by the use of zinc oxide and the corresponding carboxylic acid. The reaction time and temperature depend on the reactivity of the halide, and the nature of the O-(-substituent). Preparation of α-phenylethyl acetate has been described in detail. Chemicals of this type are used as perfumes and flavours.

594 Processing of polysaccharides.

HINDUSTAN LEVER LTD.

India 158 784 (January 1987)

In order to improve the functional properties of guar gum - e.g. to make them resemble those of locust bean gum - it is necessary to reduce the number of galactose units in the mannan main chain of gueran (the principal galactomannan of guar gum) from 30-35% by weight to 20-25% by weight. This objective can be achieved by incubating (at 40-60 C) as hydrated preparation containing 2-70% of the galactomannan with a substantially specific alpha-galactosidase enzyme preparation. The incubation can be carried out by mixing the ingredients - i.e. galactomannan, water and enzyme - in a twin-screw extruder, or in a colloid mill. The incubation must continue until the galactose content of the galactomannan reaches the desired value - e.g. for a few hours to a few days. The pH of the paste should be between 4 and 6.

595 Process for the production of absorbent paper having a good resistance to alkali.

DEXTER CH LTD

India 146640 (July 1979)

Absorbent paper having a good resistance to alkali may be manufactured by forming a paper web from an aqueous slurry of fibres and treating such a web with a series of reagents; viz: (a) a water-soluble, thermosetting, epihalohydrin-containing resin, in an amount ranging from 0.05 to 4.0% (b) a non-viscose, film forming material, 0.5-8.0% by wt.; and (c) a polyalkylene imine, 0.05-2.0% . The percentages are given with respect to the dry wt. of the fibrous web. The paper so produced may be used for packaging of meat products, such as sausages.

596 Preparation of amino acids.

INSTITUTL DE CERCETARI PRODUSE AUXILIARE ORGANICE, MEDIAS

Romania 87,760 (June 1984)

597 Method for preparing a stable solution of thiocarbonate compound.

UNION OIL COMPANY OF CALIFORNIA

India 159 714 (June 1987)

The preparation of a stable solution of a thiocarbonate compound (MnCSx) has been described. Such a solution is useful for the fumigation of soils, enclosed spaces, and agricultural commodities. It is particularly effective against nematodes. M stands for an atom of an alkali or alkali earth metal, or ammonium; n = 1 or 2 and x = 3 or 4.

598 Manufacture of sodium adenosine triphosphate.

INSTITUTUL DE CERCETARI CHIMICO-FARMACEUTICE

Romania 89,759 (June 1984)

599 Immobilized L-phenylalanine ammonia-lyase for L-phenylalanine manufacture.

MITSUBISHI CHEMICAL INDUSTRIES CO LTD.

Japan 62,111,687 (November 1985)

600 Production of methionine.

AGENCY OF INDUSTRIAL SCIENCES AND TECHNOLOGY.

Japan 61,268, 189 (May 1985)

601 L-threonine and L-isoleucine.

KYOWA HAKKO KOGYO CO LTD.

Europe 204,326 (June 1985)

602 Manufacture of L-malic acid.

MITSUBISHI PETROCHEMICAL CO LTD.

Japan 62,83,893 (October 1985)

603 Enzymic manufacture of L-tryptophan.

TECHNOLOGY RESEARCH ASSOC. FOR NEW APPLICATION DEVELOPMENT FOR LIGHT-WEIGHT FRACTIONS

Japan 62,79,789 (October 1985)

604 Manufacture of L-alanine and D-aspartic acid.

AJINOMOTO CO INC.

Japan 62,87,088 (October 1985)

605 Preparation of gamma-pyrones.

PFIZER INC.

India 144 978 (August 1987)

The invention relates to a process for the preparation of gamma-pyrones, such as pyromeconic acid, maltol, ethyl maltol and other 2-substituted-3-hydroxy-gamma pyrones. Maltol and ethyl maltol enhance the flavour and aroma of a variety of food products. They are used as ingredients in perfumes and essences also. Derivatives of pyromeconic acid are useful not only as flavour and aroma enhancers in foods, beverages, and perfumes, but also as factors that inhibit the growth of bacteria and fungi.

606 Process for the isomerization of glucose to fructose.

SOLVAY & CIE

India 159 680 (May 1987)

It is known that the isomerization of glucose to fructose is being carried out by immobilising certain protein substances, such as enzymes, on suitable supports. IP 153 562 describes a method of immobilizing protein substances in the form of granules which are insoluble in ater, rigid, and resistant to attrition. These granules are very suitable for industrial use, and exhibit an excellen- activity. A mineral support consisting of titanium sponge has proved to be the best for this purpose. The average size of the cavities in the granules is between 5 and 200 microns. The specific surface area of the granules is less than 1 m2/g. Sol bility of themineral support in water is less than 0.1% by wt. At least 70% of the total volume of cavities must be made up by cavities of a size between 1 and 500 microns.

607 A process for modifying the organoleptic properties of a food tuff or an ingredient for a foodstuff.

UNILEVER PLC

India 159 584 (May 1987)

The organoleptic properties of a foodstuff, or of an ingredient thereof, having a pH value between 5 and 7, and which has to be heated for at least 15 mins. at a temperature of at least 70 C, can be modified by heating the said foodstuff, or ingredient, in the presence of 5-keto-aldohexonic acid, or its derivative. If the heating of 5-ketoaldohexonic acid is carried out in the presence of hydrogen sulphide, or a H_2S-donor, then substances having a meat flavour are formed (See also IP 157 511).

608 A process for the isolation of wheat germ agglutinin from wheat germ.

CSIR

India 159 049 (March 1987)

The method, described herein, for the isolation of wheat germ agglutinin (or lectin) is based on ultrafiltration by means of carefully selected membranes. It is based on the association and dissociation property of wheat germ agglutinin (WGA) sub-units by critical adjustment of pH. WGA exists in its monomeric form (MW 18,000) at a pH $<$ 3.5; while it exists as a dimer (MW 36,000) at a pH $>$ 6.5. The steps involved in the process are: (1) defatting of wheat germ with petroleum ether; (2) aqueous extraction of defatted wheat germ; (3) removal of suspended material by centrifugation, and volume reduction by lyophilization; (4) ultrafiltration - selection of fractions with MW upto 20,000 and elimination of fractions with molecular weight less than 10,000; and (5) decolourization and lyophilization of the product.

FOOD ADDITIVES

609 Additives for tempura and other fries.

SHIGA YOKO

Japan 62,58,960 (September 1985)

610 Hydrophobic anthocyanin food-colouring suspensions.

SAN-EI CHEMICAL INDUSTRIES LTD.

Japan 61,106,670 (July 1984)

611 Blue food colorants from Clerodendron.

SAN-EI CHEMICAL INDUSTRIES LTD.

Japan 62,83,892 (October 1985)

612 Pigments from red cabbage as food colorants.

SAN-EI CHEMICAL INDUSTRIES LTD.

Japan 61,97,361 (October 1984)

613 Seasoning composition for pickles.

KOTANI, KOICHI AND OTHERS

CN 85,108,385 (November 1984)

614 Food aromatization.

HUMBOLDT-UNIVERSITAET ZU BERLIN

East Germany 242, 168 (November 1985)

615 An improved process for the preparation of tea infusion with retention of natural flavours.

CSIR

India 159 431 (May 1987)

Tea infusions with improved retention of natural flavours have been prepared by a two-step leaching or extraction process. In the first step, green or black tea leaves are extracted with water at 55-60 C to achieve a preferential leaching that minimizes flavour losses. In the second step, the temperature is raised to 85-95 C, so as to extract the polyphenolic compounds responsible for the body and strength of tea. Flavour losses due to interaction with proteins are reduced by a method of selective decreaming. The process, thus, dispenses with separate aroma recovery and incorporation steps, and yields tea infusions which, on dehydration, results in an "instant", cold-soluble tea of high quality.

616 A method of producing particulate flavouring materials.

MALLINCKRODT INC.

India 145 614 (April 1979).

A particulate flavouring material can be prepared by spray-drying an aqueous mixture of the flavouring agent with a disaccharide (e.g. sucrose) and a carbohydrate. The carbohydrate used for this purpose should belong to the group of hydrophilic colloids and starch hydrolysates. The ratio of disaccharide to carbohydrate should lie in the range of 50-95%. At least at 30% of the flavouring agent is entrapped in the spray-dried matrix, and less than 4% of the flavouring agent remains unentrapped on the surface of the particulate matrix.

617 Aroma addition to foods and beverages by alpha-isohumulone.

HOPSTABIL HOPFENVERARBEITUNGS GmbH

De 3,531, 130 (August 1985)

618 Preservative for foods.

SEIKEN KK

Japan 62,61,573 (September 1985)

619 Preservatives for noodles and other foods.
SUMITOMO KEIICHI
Japan 62,16,406 (July 1985)

620 Food preservative vinegar composition.
MARUKAN VINEGAR CO LTD
Japan 62,87,084 (October 1985)

621 Sorbic acid preparations as preservatives for foods.
CHISSO CORP
Japan 62,87,045 (October 1985)

622 Preservative for vegetables, salads and cut fruit.
ORGANOGEN MEDIZINISCH-MOLEKULARBIOLOGISCHE FORSCHUNGSGESELLSCHAFT mbH
De 3,624,035 (July 1985)

623 Food preservatives containing adipic acid or its derivatives.
ASAHI CHEMICAL INDUSTRY CO LTD.
Japan 62,58,973 (September 1985)

624 Liquid seasoning for pickled vegetables.
Q.P. BREWERY CO LTD.
Japan 62,58,950 (September 1985)

625 Injection pickling fluid composition containing coated salt.
AJINOMOTO CO INC.
Japan 62,118,841 (November 1985)

626 Manufacture of ptolemy salts for foods.
NAIKAI ENGYO KK
Japan 62,70,227 (September 1985)

627 Disaggregated cellulose fibers from acetate bacteria as liquid food stabilizer.
AJINOMOTO CO INC.
Japan 62,83,854 (October 1985)

628 Sweetening product, process for preparing this product and apparatus for carrying out this process.

RAFFINERIE TIRLEMONTOISE

Europe 219,150 (September 1985)

629 Sweetening agent containing aspartame and sorbitol.

MERCK PATENT GmbH

De 3,541,302 (November 1985)

630 Sweetener composition.

STALEY AE MFG CO

United States 4,676,991 (April 1986)

631 Manufacture of aspartylphenylalanine methyl ester sweetener.

AJINOMOTO CO INC.

Japan 62,74,296 (September 1985)

632 Novel acylglycine as emulsifier for foods.

NIPPON SHINYAKU CO LTD.

Japan 62,54,000 (June 1986)

633 Manufacture of rice vinegar containing succinic acid.

NAKANO VINEGAR CO LTD.

Japan 62,87,083 (October 1985)

634 Fruit vinegar.

MAGARACH ALL-UNION SCIENTIFIC-RESEARCH INSTITUTE OF WINE MAKING AND VINEARDS, MOSCOW

USSR 1,296,570 (November 1985)

635 Ginseng-containing vinegar manufacture.

YOSHIDA, HITOSHI

Japan 62,83,882 (October 1985)

636 Vinegar manufacture by bioreactor

MORI SHIGEMI

Japan 62,61,580 (September 1985)

637 Fat-low whipping cream composition.
MORINAGA MILK INDUSTRY CO LTD.
Japan 62,118,855 (November 1985)

CEREALS AND MILLETS

638 Turbidimetric determination of zein in corn.
STATIUNEA DE CERCETARI AGRICOLE, SAUCEAVA
Rome 88,698 (March 1984)

PULSES, OILSEEDS AND NUTS

639 Improvements relating to a process of manufacturing texturized protein of vegetable origin.
GRANDES MINOTERIES A DEVES DE FRANCE
India 145 290 (Sept. 1978)

The process involves preparation of a dough from legume grains - e.g. peas, chick peas, haricot beans, and lentils - containing 5-12% by wt. of water, and 55-75% by wt. of protein, followed by extrusion of the dough through a twin screw extruder such that the dough temperature rises to 200-300 C. The dough should remain at a temperaure of 100 C and above for only 15-45 secs. The extruded product can be rehydrated (by immersion in water) so that it contains 1.5-3.5 times its weight of water. The rehydrated product can be coloured and mixed with a small proportion of animal products to produce meat analogues.

640 Manufacture of soybean protein with low phytate content.
BRISTOL-MYERS COL.
De 3,630 376 (September 1985)

641 Edible, ester-low pectin form sunflower.
LING GUANTING
CN 85,106,947 (August 1985)

642 A process for the preparation of groundnut cake suitable as a component for animal foodstuff.
HINDUSTAN LEVER LTD
India 158 785 (Jan. 1987)

To make groundnut cake into an acceptable animal foodstuff, its aflatoxin content has to be brought down from 200-3000 parts per billion, to less than 50 ppb. To achieve this reduction, the cake is first comminuted to a particle size smaller than 1.5 mm (10 mesh), and its water content adjusted to a level of 12-13% preferably. The cake is then brought into contact with ammonia (0.5-2.5% by wt. of ammonia, supplied as gas, or as an ammonium hydroxide solution) at 80-95 C, under agitation, for a period of at least 1 hour. A longer contact period (say 2 h) may be required if the aflatoxin content is very high. The process can reduce the aflatoxin level to about 20 ppb.

643 Bean substitute manufacture.

SAN-EI CHEMICAL INDUSTRIES LTD.

Japan 62,65,647 (September 1985)

644 Soybean milk deodorization.

ONOZUKA,YUICHIRO

Japan 62,14,249 (September 1978)

645 Mild extraction of oilseeds.

HOPFENEXTRAKTION HVG BARTH RAISER UNDCO.

De 3,542,932 (December 1985)

TUBERS, VEGETABLES AND FRUITS

646 Sterilization of Escherichia coli in fresh vegetables and their freshness preservation.

SAN-EI CHEMICAL INDUSTRIES LTD.

Japan 62,126,931 (November 1985)

647 Manufacture of vegetable-containing frozen foods.

NISSHIN-DCA FOOD INC.

Japan 62,65,668 (September 1985)

648 Removal of textured vegetable product off-flavour by supercritical fluid or liquid extraction.

PROCTER AND GAMBLE CO

United States 4,675,198 (December 1984)

649 Sweet potato chips.

AMANO JITSUGYO CO LTD.

Japan 62,91,160 (October 1985)

650 Preservation of dried mushrooms.

MIDORI SHOKAI YK

Japan 62,69,947 (September 1985)

651 A process for the preparation of tomato ketchup powder.

MYSORE SNACKFOOD LTD.

India 159 518 (May 1987)

Tomato pulp, free from seeds, is concentrated to an appropriate solids content (9.5-12.5% total solids), in such a way that there is no physical damage to the colour due to overheating. Flours of cereals, roots, or legume grains are then extrusion cooked, either singly or in blends, to provide an expanded product which is then powdered. The tomato paste is then mixed with the powder, granulated, and dried in a hot-air oven. The dried powder isthen mixed with various kinds of spice and condiment powders, and also with powdered sugar, salt, and citric acid. Flavour enhancers (such as MSG, vegetable protein hydrolysate, or yeast hydrolysate) may also be added. The resulting product is then packed air-tight, in moisture-proof bags.

652 A process for the preparation of trimethyl ether of gallic acid from Terminalia chebula fruits.

CSIR

India 159 281 (April 1983)

The fruit cover of Terminalia chebula is hydrolyzed with a mineral acid for about 3 to 8 h and filtered. The aqueous filtrate is extracted with a ketonic or ester solvent. The organic phase is distilled off, and the residue is crystallized from water. The partially pure gellic acid thus obtained is then methylated with dimethyl sulphate and alkali. The trimethyl ether is crystallized from water, using decolourizing carbon to yield trimethyl gallic acid. The latter is a starting material for the preparation drugs used as non-hypnotic sedatives, clinical tranquilizers, local anaesthetics, analgesics, and the like.

653 Manufacture of jams.

MORINAGA MILK INDUSTRY CO LTD.

Japan 62,65,651 (September 1985)

654 Gelled fruit conditioning.

SPC LTD.

France 2,584,576 (July 1985)

SUGAR, STARCH AND CONFECTIONERY

655 Plant comprising a battery of sugarcane mills.

FIVES-CAIL BABCOCK

India 159 637 (May 1987)

The invention relates to a factory for the extraction of sugarcane juices, consisting of a battery of mills at least one of which is a four-roller mill. The juices extracted by pressure between the upper roller and the inlet and outlet rollers are used in the conventional manner for the imbibition of the bagasse feeding the previous mill, while the juices extracted by pressure between the upper roller and the fourth roller are collected separately and used for the imbibition of bagasse feeding the said four-roller mill, along with the juices which have passed through the bagasse layer and which are recycled. (See also IP 153 535).

656 A process for manufacture of superfine refined sugar from second and lower grade massecuites.

THE MAHARASHTRA SUGAR MILLS LTD.

India 146 757 (September 1979)

In the present process, the normal double-sulphitation process is followed for the manufacture of superior, plantation white sugar and lower grade massecuites. Thereafter, the lower grade massecuites are dissolved in a pure steam condensate at 70 C, to form a melt of 50-60 Brix. The melt is then treated, in a reaction tank, with lime solution, phosphoric acid, and sulphur dioxide gas, so that impurities are precipitated and all the colouring matter present in the massecuite is bleached. The melt is then passed through filter presses to get a clear, water-white, sparkling solution. This solution is then sent into vacuum pans for boiling and crystallization. The sugar so obtained is of very high quality, and is classified as superfine refined sugar suitable for manufacture of sugar cubes.

657 Preparation of a sugar concentrate from whey.

AKADEMIA ROLNICZO-TECHNICZNA, OLSZTYN

Poland 130,021 (June 1981)

658 Process for treating carbohydrates.
PENTLANDS SCOTCH WHISKY RESEARCH LTD.
GB 2,181,444 (October 1985)

659 Modified starch materials for food manufacture.
AJINOMOTO CO INC
Japan 62,17,504 (November 1979)

660 Processed starch for food manufacture.
KIKKOMAN CORP.
Japan 62,65,654 (September 1985)

661 Anticaking agents for sucrose.
MITSUI SUGAR CO LTD.
Japan 62,74,276 (September 1985)

662 Manufacture of maltotetraose.
AGENCY OF INDUSTRIAL SCIENCES AND TECHNOLOGY
Japan 62,25,992 (June 1985)

663 Manufacture of syrup.
NIIGATA PREFECTURE
Japan 62,14,793 (July 1985)

664 Coagulants containing calcium acetate as active ingredient for tofu.
KAWAHARA, TSUNE
Japan 62,87,065 (October 1985)

665 No-tempering type chocolate base composition.
ASAHI DENKA KOGYO KK
Japan 62,104,547 (October 1985)

BAKERY PRODUCTS

666 A process for preparing a bakeable composite dough and a baked flour-based product therefrom.
NABISCO BRANDS INC.
India 159 128 (March 1987)

Storage-stable cookies, having a plurality of crispy and chewy regions, and a substantially uniform colour throughout their cross-section and exterior surfaces, may be prepared by enrobing an enzyme-containing cookie dough with a sugar-containing cookie dough, or by sandwiching the enzyme-containing cookie down between upper and lower layers of a sugar-containing dough, and then baking the dough composite at a temperature and under conditions at which the enzyme is active in generating materials required for the formation of a crystallization-resistant sugar component in the inner enzyme-containing dough. The outer dough layer, containing the crystallizing sugar bakes to an outermost crisp region, while the activity of the enzyme present in the inner dough results in a discrete band or region of a moist and soft or chewy baked dough, between the layers of the baked crisp dough.

667 A method of preparing baked products exhibiting stable properties characteristic of freshly-baked products.

NABISCO BRANDS INC.

India 159 129 (March 1987)

This invention relates to the preparation of a baked, dough-based product which, long after its initial preparation, has the combined chewy and crispy textural properties characteristic of freshly based products (especially cookies). The chewy regions of these cookies are provided by including a bakeable dough component, which may or may not contain enzymes. The crispy regions are formed by a liquid, readily-crystallizable, sugar-containing component which is not dough-like, i.e. it cannot per se be baked to a final cookie product. Thus, the present invention is much more easily performed on commercial, high-speed equipment, and is more easily controllable.

668 Manufacture of breads and related products.

KANEGAFUCHI CHEMICAL INDUSTRY CO LTD.

Japan 62,61,534 (September 1985)

669 A method for manufacturing flavour chip, containing flour-based baked products having a stable, soft, chip texture after baking.

NABISCO BRANDS INC.

India 159 127 (March 1987)

Baked goods, such as cookies, containing flavour chips having a soft texture after baking, can be prepared from an emulsifier-free dough formed by admixing: (i) flavour chips, consisting of sugar, fat, and flavourants which are substantially solid at conditions at which the cookie dough is prepared; (ii) water; (iii) a sugar component; (iv) flavour; and (v) a shortening component comprising a mixture of a shortening which is fluid at temperatures at which baked cookies are conventionally stored, and a shortening which is solid at the said temperatures. The dough en

batter is then baked and the baked product is maintained at a temperature of 25-50 C for a period ranging from 3 to 30 days.

MILK AND DAIRY PRODUCTS

670 Immobilized lactase for hydrolysis removal of lactose from skim milk or other lactose-containing compositions.
SUMITOMO CHEMICAL CO LTD.
Japan 62,44,183 (August 1985)

671 Soured milk product.
CPC INTERNATIONAL INC.
CA 1,219,491 (June 1987)

672 Milk substitutes for infants.
MEIJI MILK PRODUCTS CO LTD.
Japan 62,83,843 (September 1986)

673 Concentrated and cooked sugar-milk preparation.
CENTRE AIDE PAR LA TRAVAIL (CAT)
FR 2,587,174 (April 1985)

674 Preparation of a milk substitute.
PEDRO, CASANOVA AND OTHERS
ES 546,503 (August 1985)

675 Lactose separation from milk.
VALIO MEIJERIAN KESKUSOSUUSLIIKE
FI 73,000 (November 1985)

676 Fermented milk product.
VERENIGDE COOPERATIEVE MELKINDUSTRIE COBERCO B.A.
De 3,636,625 (November 1985)

677 Cream cheese substitutes.
MIYOSHI OIL AND FAT CO LTD.
Japan 62,83,846 (October 1985)

678 Manufacture of cheese s bstitutes.
GENERAL FOODS CORP.
Japan 62,58,953 (September 1985)

MEAT, FISH AND POULTRY

679 Meat packaging material from fish proteins.
SEIWA TECHNOLOGICAL LABORATORIES CO LTD.
Japan 62,61,558 (September 1985)

680 Controlled release meat tenderizer containing latex enzyme:
BADA, KATSUMASA AND OTHERS
Japan 62,104,575 (July 1985)

681 Meat byproducts preservation by lactic acid fermentation of gelatinized starch in manufacture of feeds.

NL 84,03,620 (November 1984)

682 Preservation of meat and fish.
KUMABE, KIYOSHI
Japan 62,58,944 (September 1985)

683 Manufacture of ham.
KUREHA CHEMICAL INDUSTRY CO LTD.
Japan 62,91,163 (October 1985)

684 Preservation of water-containing foods, especially meat and sausage products.
GREINER, WOLFGANG
De 3,532,283 (September 1985)

685 Removal of aldehyde from fish proteins to improve the quality.
LION CORP.
Japan 62,83,850 (October 1985)

686 Novel peptide from fish for food manufacture.
SUEZUNA, KUNIO AND OTHERS
Japan 62,87,058 (October 1985)

687 Manufacture of shark fin-like food materials.
Q.P. CORP.
Japan 62,65,664 (September 1985)

688 Manufacture of shark fin substitutes.
KIBUN CO LTD.
Japan 62,74,262 (September 1985)

689 Fish fillet dewatering composition.
UENO FINE CHEMICAL INDUSTRIES LTD.
Japan 61,167,444 (January 1985)

690 Treatment of Myxosporidia-infested fish meat for fish paste manufacture.
SNOW BRAND MILK PRODUCTS CO. LTD.
Japan 62,22,593 (September 1979)

691 Pickling of soft herring roe.
INOGAWA, KIKUO
Japan 62,118,868 (November 1985)

692 Production of selenium-rich poultry and eggs.
WANG, DAOSHUM AND OTHERS.
CN 85,108,031 (October 1985)

MICROBIOLOGY AND FERMENTATION

693 Enhancement of microbial growth by electric charge.
AJINOMOTO CO INC.
Japan 62,58,986 (September 1985)

694 Manufacture of carbonated sake.
HANANOMAI SHUZO CO LTD.
Japan 62,40,280 (August 1985)

695 Gel food in carbonated water.
SAN-EI CHEMICAL INDUSTRIES LTD.
Japan 62,65,648 (September 1985)

696 Blood alcohol-lowering beverage containing fructose, vitamin C, quinine and/or derivatives thereof.

BANNES, MANFRED

Europe 205,634 (June 1985)

697 Bacterial production of L-histidine.

KYOWA HAKKO KOGYO CO LTD

Japan 61,242,590 (April 1985)

698 L-tryptophan from indoleacrylic acid by transformed bacteria.

TECHNOLOGY RESEARCH ASSOC. FOR NEW APPLICATION DEVELOPMENT FOR LIGHT-WEIGHT FRACTIONS

Japan 61,239,896 (April 1985)

699 Microbial production of D-α-amino acids.

KANEGAFUCHI CHEMICAL INDUSTRY CO LTD.

Japan 62,25,990 (July 1986)

700 Novel antibiotic SF-2418 manufacture with streptomyces species and its antimicrobial activity.

MEIJI SEIKA KAISHA LTD.

Japan 62,30,735 (August 1985)

701 Manufacture of vitamin B_{12} by Eubacterium limosum.

MITSUBISHI GAS CHEMICAL CO INC

Japan 62,40,295 (August 1985)

702 L-Isoleucine manufacture by Brevibacterium species.

MITSUBISHI PETROCHEMICAL CO LTD.

Japan 62,51,998 (August 1985)

703 Culture medium for growing acetic acid bacteria.

SHAITURO LF

USSR 1,306,950 (January 1985)

704 Purification of dry microorganism biomass.

ALL-UNION SCIENTIFIC-RESEARCH INSTITUTE OF PROTEIN BIOSYNTHESIS; VEB PETROLCHEMISCHES KOMBINAT SCHWEDT.

East Germany 230,556 (December 1982)

705 Process for extracting proteins from micro-organisms.

KYOWA HAKKO KOGYO CO LTD.

India 111 740 (July 1969)

Living or dry bacterial cells are first suspended in dilute (0.5-2.0N) acids, and the suspension is then heated at 25-100 C. The suspension, or the bacterial cells recovered therefro, are then dipped in water, or in a salt (NaCl solution, or an alkali solution (NaOH, KOH, $Ca(OH)_2$, NH_3OH) and/or urea solutions, at a nearly neutral pH (except when a urea soln. is used, which will have a pH value from 6-9. The novel feature of this process is the use of an acid pre-treatment, which is normally expected to cause denaturation and decomposition of the protein.

706 Process for the production of edible protein containing substances.

BANKS HOVIS McDOUGALL PLC

India 158 725 (Jan.1987)

A microbial culture, having long hyphae and little or no chain-branching, has been prepared by fermenting a strain of Fusarium graminearum Schwabe, in a continuous fermenter maintained at 25-34 C, pH 3.5-7, and under a pressure of 101-505 kN/m^2 (i.e. 1-5 atm). The culture medium must have an excess of growth promoting substances - carbohydrates, Mg, K, PO_4, Fe, Zn, Mn and Cu ions; it must also be aerated at the rate of 0.32-1.2 l/min., so that oxygen is the limiting nutrient. Because of the longer hyphae, the product can be used to produce closer analogues of poultry, fish and meat.

707 Process for producing L-lysine by fermentation.

KYOWA HAKKO KOGYO CO LTD.

India 159 606 (May 1987)

A process for producing L-lysine by fermentation of Corynebacterium organisms has been described. These organisms haveboth an ability to accumulate L-lysine in considerable amounts, and a resistance to antibiotics of atleast two or more, or a resistance of at least one of the purine analog and one of the pyrimidine analog.

708 A process for the conversion of starch-based agricultural products into alcohol.

PUNJAB TRACTORS

India 157 866 (July 1986)

Starchy agricultural products (e.g. grains of wheat or maize) are first ground to a coarse flour, then mixed with 5 times their wt. of water, and heated to 80-95 C. The slurry is then treated with amylases (0.4-0.6 g enzyme/100 l of starch slurry) to convert the starch into maltose. The slurry is then transferred to a fermen-

tation vessel where it is treated with a mutated Saccharomyces diaceticus yeast to convert the maltose into alcohol. The fermentation lasts 36-50 h. The alcohol may then be concentrated by distillation and used as power alcohol.

709 Fermentative production of guanosine and inosine.

AJINOMOTO CO INC.

Japan 62,14,794 (July 1985)

710 Isolation of basic amino acids from fermentation broth.

AJINOMOTO CO INC

Japan 62,61,592 (September 1985)

711 Extraction of citric acid from fermentation media and crude solutions.

PENDL

CS 233,444 (October 1983)

712 Device for the continuous extraction of ethanol from sweetened basic materials.

VOEST-ALPINE A-G

WO 86,05,996 (April 1985)

713 Fermentation of molasses wort for producing alcohol.

UKRANIAN SCIENTIFIC-RESEARCH INSTITUTE OF THE ALCOHOL AND LIQUEUR-VODKA INDUSTRY

USSR 1,296,579 (May 1985)

714 Making wort of low fermentability.

SCOTTISH AND NEWCASTLE BREWERIES LTD.

Great Britain 2,181,450 (October 1985)

715 Process and installation for the preparation of a sweet wort.

CLEXTRAL SA

United States 4,661,449 (July 1983)

716 Fermentor for puffed rice sake fermentation.

JAPAN NATIONAL TAX ADMINISTRATION AGENCY

Japan 62,29,960 (July 1986)

717 Manufacture of sake and other ethanolic beverages.
JAPAN NATIONAL TAX ADMINISTRATION AGENCY
Japan 62,65,678 (September 1985)

718 Manufacture of odour-free must wine.
KYOWA HAKKO KOGYO CO LTD
Japan 62,19,076 (July 1985)

719 Separation of the constituents of CO_2 hop extracts.
KALAMAZOO HOLDINGS INC
United States 4,666,731 (February 1984)

720 Preparation of low calorie beer.
MILLER BREWING CO.
United States 4,666,718 (August 1984)

721 Process for preparing a proteinase composition for stabilization of beer.
ROS LOPEZ-COBO
ES 549,835 (December 1985)

722 Beer quality improvement with malt diastase.
KIRIN BREWERY CO LTD.
Japan 62,58,983 (September 1985)

723 Controlled kieselguhr batching in beer filtration.
TOPKA AND OTHERS
CS 235,416 (April 1983)

724 Process for improving the quality of rectified alcohol by reducing its aldehyde content.
SPRINT EPITOIPARI SZERELO ES SZOLGALTATO KISSZOVETKEZET
Hungarian 39,772 (May 1980)

725 Immobilization of yeasts in porous hollow inorganic substance spheres for brewing.
AGENCY OF INDUSTRIAL SCIENCES AND TECHNOLOGY
Japan 62,44,185 (August 1985)

726 Taste improvement of alcoholic beverages by hydroxyapatite.
ADVANCE KAIHATSU KENKYUSHO KK
Japan 62,32,872 (August 1985)

727 Ethanol concentration by critical gas in alcoholic beverage industry.
MITSUBISHI HEAVY INDUSTRIES LTD
Japan 62,25,982 (July 1985)

728 Continuous ethanol fermentation with high yield.
NEW FUEL OIL DEVELOPMENT TECHNOLOGY RESEARCH ASSOC.
Japan 62,55,093 (May 1985)

729 Installation for the continuous extraction of ethanol from fermentable sugar solutions.
VOEST-ALPHINE A-G.
WO 86,06,093 (April 1985)

730 Technology for manufacturing houtoulu (Hedgehog hydnum-fermented soft drink)
ZHANG GUANGGI
CN 85,105,179 (July 1985)

731 A method of pest controlling foods and a system for carrying out said method.
ISOICELL EUROPE S.R.L.
Europe 221,856 (November 1985)

FRUIT JUICES AND SOFT BEVERAGES

732 Method for reducing bitterness in citrus fruit juices.
COCA-COLA CO.
Israeli 70,634 (January 1984)

733 Citrus juice vesicle-like food materials.
SAN-EI CHEMICAL INDUSTRIES LTD.
Japan 62,65,552 (September 1985)

734 Removal of heavy metals from water and beverages.
VITALTEK BORASZATI ES ELELMISZERIPARI KISSZOVETKEZET
Hungarian 40,817 (March 1985)

735 Process for preparing tea-containing composition.

SOUTHWARK TRADERS LTD.

India 146 702 (August 1979)

The invention relates to tea compositions containing added aluminium, in such a form and quantity as to provide a tea infusion of enhanced colour and flavour characteristics. Some common aluminium salts, added to the tea at any stage of its manufacture or preparaton, are suitable for the purpose. However, it may be advantageous to use the high aluminium content (17,100 ppm) of the ash got by burning mature tea leaves, for this purpose.

736 Tea extraction process.

UNILEVER INC.

India 158735 (January 1987)

A process has been evolved for the preparation of a tea extract - in dry powder form - which, upon reconstitution, yields a tea beverage having a flavour and colour very close to that of a brew made from tea leaf. The steps of the process are as follows: (a) contacting the tea leaf with aqueous solvent to extract tea leaf solids; (b) separating the aqueous extract from the spent tea leaf; (c) adding an acid (e.g. H_2SO4) to the spent tea leaf to reduce its pH-value to about 2.0-3.0; (d) subjecting the acidified spent tea leaf to further extraction with aqueous solvent, at pressures of about 80-100 psig, and temperatures of about 140-170 C for atleas-4 mins; and (e) separating the remaining tea leaf solids from the aqueous solvent to leave a high-temperature/high-pressure aqueous extracts. Steps (a) and (b) may be repeated thrice to obtain better yields.

737 A process for the production of cold soluble powdered tea extract.

SOCIETE DES PRODUITS NESTLE SA

India 158 791 (January 1987)

Hot soluble powdered tea extract is treated with a mixture of from 25 to 65% by wt., of a carboxylic acid, and 15-65% by wt. of a carboxylic acid salt, the proportion of the acid to the salt being in the range 0.5 to 2.5 by wt. The acid should preferably be citric or tartaric acid, and the salt, sodium citrate or calcium citrate. The resulting mix is wetted with water; a wetting aid (such as sucrose, fructose, or glucose) may be used, if desired, in an amount ranging from 10-60 parts by wt. of the hot soluble powdered tea extract, to form a homogeneous paste. The latter is then dried and ground to the desired particle size.

738 An apparatus and method of heat treatment of tea leaf in the production of unbroken tea.

TREST "CHAI-GRUISA"

India 108091 (July 1969)

An apparatus for the heat treatment of tea leaf has been designed, such that it can be used for the production of black or green unbroken tea, as well as of ordinary (red-green) tea. It consists of a drying chamber with conveyors disposed therein for moving tea leaf, hot air is supplied to the drying chamber from an external source.

739 Conversion of greentea.

HINDUSTAN LEVER LTD.

India 115 350 (June 1969)

An "instant -tea powder has been prepared by first reacting an aqueous extract of green tea (containing about 4.8% of soluble tea solids) with an ozone-air miture, at 70 C and pH 7.5, for about 30 mins. The tea solution was then cooled to 60 C, and treated with 2.4% (tea solids basis) of $CaCl.2H_2O$; the insoluble material formed at this step was removed by centrifugation (at 6700 times gravity) at 15.5 C (60 F). The "converted" green tea solution so obtained had the colour of a black tea extract and was finally concentrated under vacuum to a solids content of 85%. The solubility of the powder and clarity of the solution at beverage strength, in cold hard water, were excellent.

740 Alkalization of cocoa in aqueous phase.

SOCIETE DES PRODUITS NESTLE SA

Great Britain 2,182,538 (November 1985)

FATS AND OILS

741 Refining of fats and oils.

SUGAR, JUN

Japan 62,121,795 (November 1985)

742 A continuous method for the selective hydrogenation of edible oils and fats.

UOP INC.

India 159 162 (April 1987)

Since oxidative deterioration of vegetable oils - and especially soyabean oil - is due to the presence of the triene moiety, linolenate, in it, it is of special interest to partially hydrogenate the triene linolenate to the diene linoleate, without effecting a cis-trans isomerization, and without forming saturated fatty acids. The authors of this paper have observed such a partial hydrogenation - hitherto impossible - can be achieved by contacting the vegetable oil with a fixed bed hydrogenation catalyst consisting essentially of a zero-valent metal of Group VIII (preferably nickel or cobalt) impregnated on a low-surface-area alpha-alumina (less than 5 m^2/gram). The vegetable is passed upflow over the fixed bed, at a temperature of 150-260 C, in the presence of hydrogen at a pressure up to 150 psig (1000 kPa gauge). The method is applicable to a wide variety of vegetable oils and fats.

743 Low-melting butter substitute manufacture by enzymic interesterification.

FUJI OIL CO LTD.

Japan 62,61,589 (September 1985)

744 Manufacture of fructooligosaccharide-containing spread.

NIPPON OILS AND FATS CO LTD.

Japan 62,61,572 (September 1985)

745 Process for selective hydrogenation of lard and catalyst therein.

LI AND OTHERS

CN 85,107,291 (October 1985)

746 Masking unpleasant taste of monoglycerides.

SANYO-KOKUSAKU PULP CO LTD.

Japan 62,58,961 (September 1985)

747 Enzymic hydrolysis of natural waxes.

NIPPON OILS AND FATS CO LTDZ

Japan 62,06,693 (July 1985)

748 Bioreactor for hard butter substitute manufacture.

LION CORP

Japan 62,48,375 (August 1985)

749 Improvements relating to cooking fats.

HINDUSTAL LEVER LTD.

India 105 430 (July 1979)

It has been found that the presence of citrus oil - e.g. natural oils of oranges, lemons, limes, grapefruit, and tangerines, as well as reconstituted or synthetic citrus oils - at concentrations of 100 to 1000 ppm in cooking oil significantly reduces the development of unpleasant room odours, when the oil is used for frying. The odours that do evolve are more pleasant, though not necessarily characteristic of the citrus oil. The cooking oils that may be successfully treated in this way may be liquid, winterized oils, or a non-winterized oil like refined, bleached, and deodourized peanut oil, or a plastic shortening.

750 A process for the preparation of cocoa butter substitute from Madhuca butyracea fat.

CSIR

India 159 476 (May 1987)

The fat of Madhuca butyracea is first fractionated to obtain a fraction having a dilation value of 1500-1600 at 20 C and 0-65 at 35 C. The desired fraction is obtained by heating the Madhuca fat to 50 C cooling it to 30-32 C, and then holding it at that temperature for 3-4 h. The stearin and olein fractions are separated by filtration through a Buchner funnel. The olein that is obtained is blended with kokum (Garcinia indica) fat at 60% level, to yield a product which is a good substitute for cocoa butter. The blend may be used to make chocolate converture, milk chocolate, etc.

751 A process for treating natural fatty substances to produce one or more edible fractions.

LESIEUR-COTELLE & ASSOCIES SA

India 159 280 (April 1987)

Theprocess relates to the separation of a number of edible fractions from natural fats and oils - particularly palm oil - having a high content of saturated fatty acids; and in particular, from natural fats having saturated/unsaturated fatty acid ratio in the range of 0.3 to 1.2. The palm oil, or palm oil fraction, or an intermediate fluid obtained in the course of processing is first interesterified by using a catalyst that works in the temperature range 20-80 C. The interesterification step is then followed by at least one solvent-aided fractionation of the appropriate fatty material in the temperature range -20 to +35 C. The fluid fraction so obtained has an iodine number greater than 75, or preferably 80, and contains unsaturated triglycerides, with a triunsaturated glyceride content of at least 20%, which are free from trans-isomers. Such fluid fractions have properties resembling those of peanut oil or olive oil.

752 A process for the preparation of improved cationic fat-liquor from vegetable oil.

CSIR

India 159 041 (March 1987)

Improved cationic fat liquors, suitable for use in the leather, industry, have been prepared by reacting a vegetable oil (e.g. raw castor oil, pongam oil, or rice bran oil) with a nitrogenous base (e.g. triethanolamine, diethanolamine, or monoethanolamine) in the presence of a catalyst (such as $AlCl_3$, $ZnCl_2$, $Al_2(SO_4)_3$, or $ZnSO_4$). The reaction product is washed with a saturated NaCl solution, and quaternized with a mineral acid.

753 Manufacture of oxidation-resistant powdered oenothera biennis oil.

RIKEN VITAMIN CO LTD.

Japan 62,126,933 (November 1985)

754 Purification of glyceride-containing oils from microorganisms.

AGENCY OF INDUSTRIAL SCIENCES AND TECHNOLOGY

Japan 6265689 (September 1985)

755 Production of multiple function nutritious oil.

SCIENCE AND TECHNIQUE UNIVERSITY OF CHINA

Canada 85,101,614 (April 1985)

756 Water-in-oil emulsions.

UNILEVER PLC

Great Britain 2,182,942 (November 1985)

757 Solid oil-in-water emulsion food composition.

MORINAGA MILK INDUSTRY CO LTD.

Japan 62,65,736 (September 1985)

758 Extraction purification and separation of oils from seeds.

SHOWA TANSEN CO LTD

Japan 62,59,697 (September 1985)

759 Edible-oil purification compositions.

MATSUSHITA ELECTRIC INDUSTRIAL CO LTD.

Japan 61,103,997 (October 1984)

760 Edible-oil purifying agents.
MATSUSHITA ELECTRIC INDUSTRIAL CO LTD.
Japan 61,103,998 (October 1984)

761 Plant oil and fat refining.
OELMUEHLE HAMBURG A-G
DE 3,532,737 (September 1985)

762 Fish oil purification.
UNITED STATES DEPT. OF COMMERCE
United States 936,305 (December 1986)

763 Eicosapentaenoic acid manufacture from fish oil.
BABCOCK-HITACHI KK
Japan 62,72,793 (September 1985)

SPICES AND CONDIMENTS

764 Succinic acid-containing condiments.
NAKANO VINEGAR CO LTD.
Japan 62,87,070 (October 1985)

765 Garlic-containing oral preparation.
SCHERER RP Gmbh
DE 3,541,304 (November 1985)

766 Thickening agents for pickles.
DAICEL CHEMICAL INDUSTRIES LTD.
Japan 62,91,142 (October 1985)

DIETETIC AND PROTEIN FOODS

767 Process for preparing a nutritional composition.
CONTROL DRUG INC.
India 143 838 (February 1978)

The composition in question is a highly efficient source of nutrition, without any undesirable side effects. It provides protein in a concentrated but highly palatable form, and is intended

to overcome nutritional deficiencies caused by disease. The composition, which may be used for artificial feeding, contains, in its liquid form, a gelatin hydrolysate (prepared with the help of enzymes), sorbitol, a palatable acid (fumaric or adipic acid for maintaining the necessary acid pH, tryptophane, a synthetic sweetener, flavouring and colouring agents, and also preservatives.

768 Process for preparing dietary fibers, fibers obtained and food containing the same.

SUCRE RECHERCHES ET DE DEVELOPMENTS

Europe 223,703 (November 1985)

769 Hydrolyzed protein chelates.

VITA TECH INTERNATIONAL INC.

WO 87,02,867 (November 1985)

770 Citric acid-treated blood as protein-rich food material.

MATSUO, HIDEMARO

Japan 62,104,555 (October 1985)

771 High-protein food material manufacture.

MUROJI, SUSUMU

Japan 62,111,669 (November 1985)

772 Sonic process for converting proteinaceous raw materials in situ into semi-solid food products.

REACTION TECHNOLOGY INC.

United States 4,675,194 (March 1986)

773 Solid health foods containing natural taurine.

NIPPON SUISAN KAISHA LTD

Japan 62,126,954 (November 1985)

INFESTATION CONTROL AND PESTICIDES

774 A process for preparing a granular pesticide composition.

PENWALT CORPORATION

India 159 290 (April 1987)

The invention relates to a process for preparing a granular, slow-release soil pesticide composition, using a polyvinyl alcohol/borate base.

775 A method for the preparation of difluoromethoxyaromatic compounds.

AMERICAN CYANAMID CO.

India 159 351 (May 1987)

Difluoromethoxyaromatic compounds, prepared by the method described in this patent, are useful as intermediates in the preparation of pyrethroid pesticides.

776 Improvements in the sterilization of soil, soil so sterilized, and pesticidal compositions therefor.

FISONS PEST CONTROL LTD.

India 112 596 (July 1969)

1,2,3,4-tetrafluoro-5-nitrobenzene is an active pesticide, and is particularly useful as a soil sterilant. Packaged soil can be sterilized by adding the aforesaid compound to it.

777 Process for preparing an insecticidal composition, especially for combating the potato-beetle.

INSTYTUT PREZEMYSLU ORGANICZNEG

India 146 441 (June 1979)

The insecticidal compound described in the patent consists of a mixture of (a) 0,0-dimethyl-O-1(2,4-dichlorophenyl)-2-bromvinyl phosphate, and (b) 1,3-di(thiocarbamyl)-2-N-dimethylaminopropane hydrochloride. The proportion of (a) to (b) may vary in the range 1:10 to 10:1. Admixture of (b) to (a) reduces the toxic effect of (a) on ees, The mixture can be used to control not only the potato beetle, but also insects pests of maize and rice.

778 Process for preparing an encapsulated rodenticide.

OCCIDENTAL CHEMICAL CORPORATION

India 159 724 (June 1987)

Zinc phosphide (Zn_3P_2) which has been coated with about 2-10% of its weight of a thermoplastic polyamide is added to a bait composition containing grains or processed grains, and mixed with a binder. The binders must be able to dissolve in the rodent's stomach to allow slow release of the toxicant, and must include polyols and sugar-containing fluids. A zinc compound, e.g. ZnO, may be added to the baits to prevent liberation of phosphine, and rejection by the rodent. Histamine, a histamine salt, or a histamine producing substance may also be added to the rodenticide, to stimulate the production of gastric juice by the rodent, further increasing the efficacy of the rodenticide.

WASTE UTILIZATION

779 Biomass production.

ALL-UNION SCIENTIFIC-RESEARCH INSTITUTE OF PROTEIN BIOSYNTHESIS

East Germany 230,559 (December 1982)

780 A method of producing dietary fibre product from cereal grain husks.

TRICUM AB

India 158 721 (January 1987)

The husks of cereal grains (e.g. wheat) are mixed with water in a tank, and treated with a mixture of enzymes - an amylase, a protease, and a phytase. The mixture is maintained at a temperature of 55 C, and a pH range of 4.5-6.0, for 6-12 h. Finally, the mixture is dewatered, boiled in fresh water, and then dried/cooled. The action of the enzymes can be controlled by the addition of lime to give a product containing: 70-90% (by wt) fibre, max. 8% protein, max 4% fat, Max. 2% minerals and max. 0.5% phytic acid.

781 Fibrous food material manufacture from cereal bran.

TAJIMAYA SHOKUHIN CO LTD.

Japan 62,111,647 (November 1985)

782 Fibrous food material manufacture from soybean-curd waste.

TAJIMAYA SHOKUHIN CO LTD.

Japan 62,111,646 (November 1985)

783 Method for production of swine feed using non-processed cottonseed or rapeseed cakes.

CHEN YIFENG

CN 85,107,769 (October 1985)

784 A process and plant for production of table vinegar from waste honey.

S.M.CHAKALAKKAL.

India 158 716 (January 1987)

When raw honey is packed for sale under the "AGMARK" label, a good portion of waste honey is obtained. The authors have described a method of converting this waste honey into a vinegar of very superior quality by fermenting with (a) a strain of yeast specially developed in a medium containing honey of 25% sugar content; and (h) a strain of Acetobacter specially developed in a medium containing 14% acetic acid. The main novel feature of the final product is its higher acidity. The process is characterized by (i) its operational simplicity, and (ii) the high speed of conversion by the special yeast and the special acetic bacteria culture.

785 Improvements in the treatment of tea waste for the preparation of black tea.

TEA RESEARCH ASSOCIATION

India 126 317 (August 1971)

The valuation of a black tea may be increased by the addition of theaflavins, or their gallates, to the tea at an appropriate stage of manufacture. Theaflavins and/or their gallates can be obtained by solvent extraction of tea waste, tea stalk, tea fluff, and similar materials. The patent describes an extraction method which makes use of diethylether as solvent. Broken glass or kieselguhr are admixed with the tea waste, to increase the rate of flow of ether through the material and reduce the extraction time.

Regd. No. 36730/84

Printed and Published by Dr. B. L. Amla, Director, Central Food Technological Research Institute, Mysore 570 013 at C.F.T.R.I. Offset Printing Unit. Editor : Shri K. A. Ranganath, C.F.T.R.I. Mysore